



THOMAS G. NEWMAN,
EDITOR.

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EDITORIAL BUZZINGS.

☞ The honey-bee is a regular merchant. It "cells" combs for a living.

☞ One apiarist first ordered a thousand Almanacs. These worked so well in disposing of honey, that he has just bought 3,000 more. It pays to scatter them liberally.

Mr. George Henderson, for many years sub-editor of the *British Bee Journal*, died on Dec. 21, 1889. He was an accomplished linguist, a Greek scholar, and a highly-esteemed gentleman.

☞ Among those prominent apiarists who have been visited by *la Grippe*, we may mention G. M. Doolittle, C. P. Dadant, Ernest Root, J. Van Deusen, James Heddon, J. E. Pond, E. L. Pratt, and many others whose names we do not now recall. They all have our sympathies.

Our Thanks are due for the many kind allusions to our late illness in the bee-periodicals, as well as in hundreds of private letters. We are sorry to learn that many of the editors of the bee-papers have suffered from *la Grippe*, in more or less severity. We never recovered so slowly from any previous illness, and this seems to be the case with others. The grip on our vitals was a tight one; and to-day, after a month's tussel with it, we are not able to do half as much as formerly in the same time. We do not want to have anything more to do with anything Russian—the Cossacks may keep it at home, or else banish it to Siberia, as they do all the rest of their unwelcome things.

Honey for La Grippe.—The item on honey for *la Grippe*, published on page 35, is being copied quite largely, through the influence of bee-keepers all over the country. The Elgin, Ill., *News* published it, and then followed it with these additional lines:

We know of one family that has eaten freely of honey for a couple of weeks or so, and while neighbors have had the grip, it has not invaded that household.

Honey is both good as a preventive and to build up the system after *la Grippe* has departed, and if the legacy of complications is not too great, it will soon restore the patient to the usual strength of body and mind.

If the complications are too numerous, of course it will take time to overcome them, as will the most careful nursing, and the most efficient physician's prescriptions. We know, for we have had lots of experience in that line for the past month or more.

Taxing Bees in Iowa.—Mr. G. B. Olney, of Atlantic, Iowa, has sent the following to his local paper, the *Democrat*, which published it in a late issue:

Last winter our assessors were instructed by the Board of Supervisors, to assess bees at \$2 per colony. This year they dropped one-half. Well, just drop another dollar, and you will come to a standard of a true interpretation of the revenue laws of Iowa. Bees are exempt, and you cannot read the law any other way.

The very convincing article by Mr. Eugene Secor, published on page 666 of last year, settles the point that, in Iowa at least, bees are not taxable. Mr. Olney adds the following about the sale of bees at auction in that locality:

Bees, at a public sale near here a few days ago, sold at \$4 per colony. This is much better than I have seen for many years.

The Three bee-periodicals heretofore published in England have been consolidated under one management, viz: Mr. T. W. Cowan and Mr. W. B. Carr. The *British Bee Journal* is published weekly, and the *Record* and *Adviser* have been united, and will be published monthly, as heretofore. The sizes have been changed, and excepting the narrow margins, both periodicals make a good appearance. We wish both them and the editors much success.

An Enigma.—On page 72, Mr. Pratt makes an allusion to Messrs. Holtermann and Young. The article was put in type while we were unable to pay much attention to such matters, and, in answer to several inquiries, we must say that we have not yet discovered what the writer was driving at. Our English friends seem to relish such items written by "Amateur Expert," but we do not think that we have any use for them in America. Please do not ask us to explain any more of the riddles.

A Use for Propolis.—It appears that in Russia propolis is used for varnishing wooden ware, and resists the dissolving powers of hot water. Mr. A. Toulareff states that it is purchased by the hucksters, who pay about one halfpenny for permission to scrape or plane the hive that has lost its bees. The shavings covered with propolis are heated, put into a wax press and subjected to the treatment used in the extraction of beeswax; the propolis is then purified in hot water, to which sulphuric acid is added. About 50 per cent. of propolis is thus obtained, which sells at 40 cents per pound. The propolis is poured into hot linseed oil and beeswax in the following proportions: Propolis, 1; beeswax, $\frac{1}{2}$; oil, 2. Previously the oil should remain hot on the stove for 15 to 20 days without boiling, to give it the property of drying.

The wooden ware is dipped into the above-mentioned preparation, and must remain in it for 10 or 15 minutes, after which it is cooled, and rubbed and polished with woolen rags. Propolis is so plentifully collected by the bees in some parts of this country, that I should imagine it would repay the bee-keeper to save it. It would do capitally for coating the interior of wooden feeders, etc.—*Australasian Bee Journal*.

James Vick, seedsman, of Rochester, N. Y., offers \$1,000 in cash premiums, to be awarded at the Illinois State Fair, to be held at Peoria, Ill., Sept. 29, 1890, by the society's judges, for best cabbage, celery, potatoes, cauliflower, tomatoes, musk melon, onion, and mangel. Last year the prizes awarded at the New York State Fair went to Pennsylvania, Michigan, Iowa, and New York. This year we are anxious to see Illinois take the lead, and hope that all interested in vegetables will send to Vick, of Rochester, for particulars regarding this offer. No doubt it will be one of the principal features of interest at the Fair.

The Vicks will erect a separate building, or tent, in which they will make a grand show of flowers with the vegetables, and will be on hand to receive their friends. Every person growing vegetables should send 10 cents for a copy of "Vick's Floral Guide," and learn the facts. It costs nothing to try.

"Vick's Floral Guide" is one of the handsomest catalogues published. The illustrations are intended to give the reader a correct idea of the plant or flower illustrated.

☞ During January, the weather was warm and moist in the Northwest. February comes in with snow and colder weather. The bees wintered on the summer stands have been "on the wing" considerably, and if the "spring dwindling" is not very severe, there will be plenty of bees to gather the harvest next season. We have not had such a winter for more than a dozen years.

Doolittle's New Book on "Queen-Rearing" receives excellent endorsement in New Zealand. The *Australasian Bee Journal* for December contains the following:

I have recently been trying Doolittle's plan of queen-rearing, and although I have only given it one trial, it was quite successful. The cells, twelve in number, were cast on a smooth piece of glass that just fitted the bottom of a natural queen-cell. In them I placed a small quantity of royal jelly, and on this I transferred an ordinary worker larva about thirty hours old, with the aid of a pointed quill.

The cells were then fixed with hot wax to half a bottom-bar, and inserted in the centre of a comb from which a piece had been cut about the size of a man's hand, which was then placed in a two-story Langstroth hive, the queen being confined to the bottom box by means of perforated zinc. The bees immediately commenced working on these embryo cells, and in due time I cut out ten fine queen-cells, which were placed in a nursery, with the result that eight emerged.

At the same time I tried a new plan of my own, which I prefer to Doolittle's, for the reason that the delicate operation of transferring larvæ has not to be performed. These gave me queens equal to Doolittle's in appearance and number, although the cells were not so slightly. However, as I am still carrying on my experiments with both methods, I prefer to say no more about it until the end of the season, when I will fully describe my own method. However, I have proved to my satisfaction that it is not necessary to remove the reigning queen, in order to induce the bees to construct cells and rear queens.

Our Friend, Mr. Eugene Secor, was elected President of the Iowa State Horticultural Society, at the annual meeting held at Des Moines last month. Mr. Secor began on the ground floor, being first a Director, then Superintendent of an Experiment Station, which position he now holds; then Vice-President for the past three years, and he has now reached the top round in the ladder of promotion. His election to the position is a well merited compliment, fairly won by faithful and intelligent service in the science of horticulture. Mr. Secor is a practical farmer, "having been to the manor born," and has spent a good deal of time in the study of agricultural pursuits. The above is gleaned from the *Winnebago Summit*.

New Catalogues and Price-Lists for 1890 are received from—

- Colwick & Colwick, Norse, Tex.—4 pages—Bees and Queens.
- I. R. Good, Vawter Park, Ind.—1 page—Italian and Carniolan Queens.
- Jerry A. Roe, Union City, Ind.—12 pages—Bee-Keepers' Supplies.
- J. W. Bittenbender, Knoxville, Iowa—24 pages—Bee-Keepers' Supplies and Italian Bees and Queens.
- H. A. Hubbard, New Lisbon, N. Y.—4 pages—Hubbard's Advertiser.
- E. E. Smith, Tilbury Centre, Ont.—20 pages—Apiarian Supplies.
- F. B. Mills, Thorn Hill, N. Y.—36 pages—Seeds.
- Jas. J. H. Gregory, Marblehead, Mass.—60 pages—Seeds.

BIOGRAPHICAL.

R. F. HOLTERMANN.

It affords us no little pleasure to give, in these columns, the likeness, as well as a short biography, of our friend and co-worker, Mr. R. F. Holtermann, of Romney, Ont., Canada. It is seldom that one so young in life comes so rapidly into prominence, as has Mr. Holtermann; yet it is no great wonder, when one considers the push and energy that has ever been the marked characteristics of the man—especially when coupled with a firm determination to be, and to do, right.

The following is a condensed biography of Mr. H.:

Richard Ferdinand Holtermann was born in the city of Hamburg, Germany, on June



R. F. HOLTERMANN.

14, 1860. Two years later, the parents, with their son and two daughters, emigrated to Canada, settling in the county of Renfrew, Ont. There, at the age of 12 or 13, young Holtermann received a portion of his education from a governess. Later, he was sent to a private school, and shortly afterward he attended the Ottawa Collegiate Institute, at Ottawa. There his mind wandered, he says, in the direction of boating, cricketing, swimming, etc., rather than toward study.

When about 14, his father moved to Toronto, and then sent his son to the Upper Canada College, where he received the "1 A diploma." He then decided to go on the farm. Shortly afterward, he attended the Ontario Agricultural College, where he graduated with honors, being only 70 marks out of 4,000 behind the first medalist. It was in this school, in the capacity of librarian, that the subject of apiculture was opened up to him through the medium of several bee-books.

The next season was spent as a student with Mr. D. A. Jones, in the apiary. He

next made the great mistake, he says, of embarking in apiculture a little too soon. The result was, he learned many severe lessons. With his apiary of 79 colonies he underwent the trying ordeal of a bad season, to begin with. However, he secured enough Alsike clover honey to enable him to secure the second premium at the Toronto Industrial Exhibition.

Later, he entered into some speculations, and came out nearly \$1,000 in debt; but, unlike a good many young men, he was not discouraged, but went to work again, and paid 100 cents on the dollar, instead of trying to get out, as he could have done, by paying a few cents on the dollar. He entered the employ of E. L. Gould & Co., of Brantford, commencing at 85 cents a day, and left as manager of the supply business, and editor of the *Canadian Honey-Producer*!

He married, on May 17, 1887, Lois, daughter of S. T. Pettit, of Belmont, Ont., whom he met at the last meeting of the North American Bee-Keepers' Convention, held at Rochester, N. Y. They have one son and a daughter; and in their home they seek to have God's will their own. As might be expected, Mr. H. uses neither tobacco nor liquor.

Mr. Holtermann has made bee-keeping pay, and he has averaged, he says, latterly, \$8.00 per colony, income. He thinks that anybody can do as well in a fair locality, providing they start with one or two colonies.

Mr. Holtermann has been active in bee-associations, in which he has held various offices. At the meeting held in Columbus, O., his name was proposed several times for the presidency of the association; but he very modestly declined the honor, in favor of another member. His name was next proposed for secretary, and was carried by the unanimous consent of the association.

He has held various presidencies, and a large number of secretaryships; and, at one time, the bee-departments in three agricultural periodicals.

A Useful Salve.—The following recipe for making salve is much valued by those who have used it. With it are made plasters equal, or perhaps superior, to any obtained from druggists, and at an expense so trifling that one can be afforded for every pain. They have been used upon the chest and between shoulder-blades, when there was a soreness of the lungs, with tendency to pneumonia, and also to relieve back-ache, which is woman's almost universal complaint. The salve is indeed so valuable, that no household should be without it:

Two pounds of resin, 3 ounces of bees-wax, 4 ounces of mutton tallow, and one gill of whisky; put into a kettle sufficiently large that it may not boil over, and stew until dissolved. Make it into sticks like molasses candy. Place a tin upon the stove, and upon the tin a piece of fine wrapping-paper, a little larger than the required plaster, and rub the wax upon it.

Some have requested us to print a card on a less number than 100 Honey Almanacs, and we have concluded to accommodate them. We will furnish 25 copies with card printed on the first page, **postpaid**, for \$1.10; 50 copies for \$1.70; 75 copies for \$2.30. See prices for more, on the page 95.

QUERIES REPLIES.

Making Wooden Separators— The Kind of Wood.

Written for the American Bee Journal

Query 686.—I wish to use wooden separators in my T-supers. I find that some manufacturers saw them 1-16 of an inch thick, and others slice them 1-20 of an inch thick. 1. Are the sliced as good as the sawed ones. 2. If not, are they at all satisfactory? 3. Of what kind of wood is it profitable to make separators?—IOWA.

I prefer tin separators.—G. M. DOOLITTLE.

1. I have never used the sliced separators. 3. Basswood.—J. M. HAMBAUGH.

I have had no experience with wooden separators.—A. R. MASON.

Wooden separators did not prove satisfactory with me, and now I use only the tin.—P. L. VIALLO.

1. The sliced ones are more liable to warp than the sawed ones. 3. Pine and basswood are both good.—MRS. L. HARRISON.

I have no experience with separators, and have no intention of using them. I can crate my honey without their use.—M. MAHIN.

1. The sawed ones are the best—they do not warp as much as the sliced ones. 2. Poplar, basswood and pine make good separators.—J. P. H. BROWN.

1. The thinner, the better, if they do not warp. 2. I use tin. 3. I doubt if it is profitable to make them of wood; but if cheaper than tin, I should use the cheapest wood I could get, that would stay put.—EUGENE SECOR.

1. I think that the 1-16-inch, sawed separators are the best. 3. They should be made of reasonably hard wood, or the bees will gnaw them. I have never used sliced separators.—C. H. DIBBERN.

1. I have used sliced ones that seemed entirely satisfactory. 3. I never made any, and at the low prices offered, I think that it is more profitable to buy them.—C. C. MILLER.

1 and 2. If properly handled, I do not think that there would be much difference. 3. The bees "chew up" basswood, to some extent. Poplar would be better.—R. L. TAYLOR.

1. Yes; any separator is good, that will act as such; the thinner, the better. 3. Any wood that can be made thin enough, without splitting or warping in use.—J. E. POND.

1. The sawed ones are the best. Sliced ones are good, if dried in a press; if not, they are crooked, unsatisfactory things. 3. White poplar is good—good enough.—J. M. SHUCK.

1. I am using each kind, but I find that the sawed separators are much better than the sliced ones. In slicing, it breaks the grain, and the bees tear it down on the face of the section. 2. The sliced separator will answer, but it is not as good as those sawed smooth. 3. Whitewood is the best that I have used.—H. D. CUTTING.

1. No; sliced separators are not as good as sawed ones, if of a suitable thickness. Mine are sawed 14 to the inch. They may be used for many years, and out-last tin. 2. Sliced separators will bulge, warp and get out of shape, and can frequently be used but once. They cannot be used with open-side sections. 3. The yellow poplar, or whitewood, is the best wood to make them of.—G. L. TINKER.

1. The "sliced" separators are superior to the sawed ones, when the work is properly done. All wooden separators that I have handled, are objectionable, because they require nice care and handling to keep them from warping out of all shape. Tin is free from these objections. 3. This is a question that concerns the manufacturer more than the consumer. Linden timber furnishes the best that I have seen, though not as fancy in appearance as white poplar.—G. W. DEMAREE.

1. The T-super is a good surplus receptacle, especially for the use of wooden separators, and whether the sliced or the shaved are the best, depends upon the workmanship. A good sliced separator is better than a poorly shaved one. 2. Yes; sliced separators are perfectly satisfactory, and all the better for being thinner. I have tried all kinds of separators, and wooden ones, from 1-32 to a bee-space in thickness, and taking cost and everything into consideration, I say they should be about 1-20 of an inch thick, and made of first-class whitewood or poplar.—JAMES HEDDON.

Heat in Hives with Larvæ and Sealed Brood.

Written for the American Bee Journal

Query 687.—1. Does it require as much heat for larvæ and sealed brood, as for eggs? That is, when a queen has laid as many eggs as the colony can keep at the proper temperature, must she stop laying, or can some of the bees be spared as soon as the eggs are hatched, to cover freshly laid eggs? 2. Do larvæ or sealed brood add any heat to the colony?—PENNSYLVANIA.

At present, I do not know.—H. D. CUTTING.

1. Perhaps not. 2. A little, perhaps.—M. MAHIN.

1. I think so. 2. Certainly some, though, practically, none.—A. J. COOK.

1. No. 2. Yes. The process of development in animal life produces heat.—A. B. MASON.

1. Probably not. 2. Wherever there is life, there is heat.—MRS. L. HARRISON.

I have not experimented on this line, and can only guess; and, that, you can do as well.—C. H. DIBBERN.

This is theoretical with me, but I should say: 1. Yes. 2. Yes; but so little that it is of no consequence.—EUGENE SECOR.

Sealed brood requires less heat than larvæ or eggs, the latter requiring from 90 to 96 degrees to perfect them.—G. M. DOOLITTLE.

1. I believe about six of one, and one-half dozen of the other. 2. In about the same ratio that the eggs do, under a setting hen.—J. M. HAMBAUGH.

1. It requires more heat for larvæ and sealed brood, as eggs will retain their vitality at a much lower temperature than larvæ. 2. No; they require heat.—P. L. VIALLO.

1. It requires a little more heat for larvæ than for eggs. 2. Larvæ and sealed brood also add some heat to the colony.—J. P. H. BROWN.

1. I would rather Prof. Cook would answer for me. 2. I suppose that larvæ or pupæ, or anything else that eats, evolves some heat.—JAMES HEDDON.

1. I do not know. Bees in a hive are not practically useful unless there are enough to cover most of the brood-combs in early spring. 2. I do not know.—J. M. SHUCK.

1. It depends altogether upon the outside temperature; but it is evident that the

living larvæ develops heat to a certain extent, and, therefore, adds a little to the colony's heat.—DADANT & SON.

Where there is life, there is heat; so the larvæ and sealed brood contribute some heat to the colony, but it is not great enough to mature sealed brood without the presence of the bees, at ordinary summer temperatures.—G. L. TINKER.

1. I do not know, but I am inclined to the opinion that more bees are needed to cover and hatch out a square foot of comb filled with eggs, than to keep the larvæ warm enough in the same amount of comb.—C. C. MILLER.

1. Egg-laying and brood-rearing are constantly going forward. The bees will take care of the whole matter, if left alone. 2. Yes, to some extent; but they must be kept warm, else they die, and then no warmth can come from them. What funny questions!—J. E. FORD.

1. The only experience I have in the matter of the query, has been obtained by shipping and receiving eggs, larvæ and sealed brood by mail. The eggs seem to stand the least exposure of all, while the sealed brood will stand the most. 2. In my experience, there is animal heat in a marked degree in sealed brood. Some years ago, my apiary was raided by thieves, and combs of brood were scattered on the ground; there was a hard frost that morning, and some of the combs of brood were white with frost, yet nearly all the sealed brood hatched.—G. W. DEMAREE.

1. Bees do not hatch the eggs by "sitting" on them, but by the heat generated by their bodies, and confined by the walls of the hive in warm weather, and by the "crust" of the cluster in cool weather, and all parts of such warmed space are kept at the same temperature as nearly as it is possible, for the bees do it so that a given piece of comb is at the same temperature whether it contains eggs, larvæ or sealed brood. 2. It requires much less flame to keep up the temperature of an incubator containing eggs in which are half-developed live chickens, than one containing fresh eggs. The chicks are generating heat, and are "adding heat" to the incubator in perhaps a negative sort of a way. Without question, it is the same with brood. A colony could keep at the desired temperature, a larger space, if it contained nearly mature brood, than if it contained only eggs.—R. L. TAYLOR.

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We desire that every one of our readers should secure its regular visits during the year 1890, and in order to induce them to do so, we will make this tempting offer:

We will Club the AMERICAN BEE JOURNAL and the ILLUSTRATED HOME JOURNAL, and mail both periodicals during the whole year 1890 for \$1.60, if the order is received at this office by March 31, 1890—when this offer will end, the regular rate being \$1.75.

Clubs for anything in our Premium List may be for either of our JOURNALS, or for any number of either or both of them.

CORRESPONDENCE.

WIDE FRAMES.

Section-Cases, or Wide Frames? —How Made and Used.

Written for the American Bee Journal
BY G. M. DOOLITTLE.

I am asked by a correspondent to tell the readers of the AMERICAN BEE JOURNAL what kind of a section-case or wide frame I prefer, and use, in working for comb honey. As it is now the time of year when all beekeepers should be preparing for the next honey harvest, perhaps I cannot do better than to give an outline of what I use, so that any one who desires to try this style of surplus arrangement, can make a few at this season of the year.

While I use and recommend these wide frames, and they are applicable to any bee-hive now in use, I do not expect that all will like just what I do; therefore I would suggest that those who wish to try them, can make only a few at first, then, if after a trial of a year or two they conclude that they like them, they can make more; but if, on the contrary, they do not like them, they have been to no great expense in finding out what they want.

All that is necessary, is to make the sections and wide frames so that they will fit the top of the hive used. Get all the pieces out true and square, after which nail them over a true, square form, so that each wide frame will fit exactly against its neighbor, for one section-case is to be made out of a number of wide frames.

I also use separators on these wide frames, if I want universally nice honey. If to be used on the tiering-up plan, the tops and bottoms are to be made $\frac{3}{4}$ of an inch narrower than the ends; if only one tier high, as I prefer to use them, then have the tops the thickness of the tin wider than the sides or ends, for the separators are to be nailed to the ends.

FASTENING ON TIN SEPARATORS.

After using several kinds of materials for separators, I prefer tin to anything else. The nailing on of this tin has much to do with our liking, or disliking, wide frames; for if nailed on loosely, so as to kink and bulge, the operator will become disgusted with them. When I first made them, I used a hand-vise to draw the tin tight, having things so arranged that I could pry over one end of the wide frame, thus stretching the tin so tightly

that it would fairly ring when hit a little. While thus working one day, I noticed that in drawing the tin very taut, I often sprung the top and bottom of the frame, out or in, as the case might be, and from this I soon had a way of putting on the tin perfectly, every time.

I made a form a trifle shorter than the frame was long, outside measure; this form being perfectly true and square, which gave advantage over the vise method, for with that the frame was sometimes drawn out of true.

Next, I made a block the size of the frame (except a little shorter), and of the same thickness as the ends of the frames, which was tacked to the form. To use it, I sprung or bent the top and bottom bar of the frame a little, thus shortening it, until it bent into the form, when I laid on the tin separator, placing a straight edge on top of the tin, and a weight on this. I then had the tin just where I wanted it, with all the bulging taken out of it, when it was nailed fast to the wide frame. Upon removing it from the form, the top and bottom sprung back into place again, thus drawing the separator as tight as a drum-head.

After the wide frames are all made, and the separators put on, they are to be filled with sections, when they are ready to be keyed together so as to form the section-case.

I have tried all ways of keying these wide frames together, using in a clamp, etc., all of which I did not like, as I wished a plan that would allow of using as few or as many wide frames on a hive as I pleased—from two up to twelve, according to the strength of the colony; for often, with the old plans, we are obliged to give too much surplus room to start with. Finally, I accomplished what I was after, by procuring some rubber bands about $\frac{3}{4}$ of an inch wide. These I cut into pieces $2\frac{1}{2}$ inches long. To one end I attached a fine, stout string (by means of a slip-knot) about 5 inches long, and to the other end, one about 18 inches long. The short string was firmly tied to a nail driven into the end of the board which comes against the outside of the outer wide frame; another being attached to the opposite end of this board in the same way.

Lately, I have used coil-wire springs (such as are used on hanging lamps to keep the shades up) in place of the rubber bands, and I find them superior to the rubber, in that they give a stronger tension, and will last a lifetime, while the rubber has to be renewed every few years. Still, the rubber bands answer a good purpose, and can be renewed as often as necessary, where it is not easy to find the springs.

In each end of the board which goes on the outside of the opposite outside wide frame, is driven a large-headed, steel-wire carpet-tack. The tack is driven in within about one thirty-second of an inch of its large head, so that when a string is wound around it a little more than once, it is clamped as securely as if tied.

The wide frames of sections are now placed on the hive, two, three, five, eight, or twelve, as the colony requires; putting on the little outside board to close all, draw the rubber till a strong tension is made, and wind the string around the tack. In this way the wide frames are held as in a vise, yet they give all the lateral movement required, so as to use the right number which the apiarist may desire, and can be taken off as one case, or separately, tiered up, reversed, interchanged, etc., according to the views of the most exacting.

With this arrangement, there is no need of a honey-board to keep the brace-combs off the sections, for they are fully protected by the wide frames. Where contraction of the brood-chamber is practiced, so that there is danger of the queen entering the sections, then it is well to use the wood-zinc, queen-excluding honey-board, which keeps her below, no matter how small the brood-nest.

For new swarms, I like the contraction principle, and use it largely on such; but for all other colonies, I use nothing over the frames except this section-case of wide frames, only where there are not enough wide frames put on a hive to fully cover the brood-frames below, then the bee-quilt, or enameled cloth covering, used before the sections were put on, is folded back over these frames, thus making all tight, so that no bees can come above.

During the height of the season, the whole top of the hive is covered, as a natural consequence; but as the season draws to a close, the wide frames are again contracted, so as to have as few unfinished sections in the fall as possible, when the enameled cloth is again brought into play, spreading it out further and further, as the wide frames filled with honey are taken off, so that at the end of the season, there will only be the two or three wide frames on the hive, which there were to start with.

There may possibly be a little more labor in this way of securing honey, than there is by some other plans, but as it conforms perfectly with the wants of the bees, enough more honey is secured to more than pay for the extra labor.

Borodino, N. Y.

BEE-ITEMS.

Experience with Queens—Races of Bees, etc.

Written for the American Bee Journal
BY JAMES T. FIFE.

In 1888, I ordered 50 queens from breeders who patronize the AMERICAN BEE JOURNAL, and I promised some of them that I would report my success with the various queens. This I could not do without doing great injustice to some who sent me very fine queens; for some of them came early in the season, others late; some came when there was a good honey-flow, others when there was no flow. I took considerable pains in measuring the brood, but the circumstances were so different that I could not make a just estimate, and so better none at all.

I sold all my bees in South Kansas except 2 colonies—one with a Doolittle queen, and the other with a queen from a breeder in Texas. Those 2 colonies I shipped back here to South Iowa; I divided each twice, making 6 colonies out of the two. I took from one of them, spring count, 215 pounds; from the other, 97 pounds of honey, besides rearing queens.

I would get a neighbor bee-keeper to give me some swarms, for which I would give him young queens when reared. I had the queen-cells ready, and when I brought home my new swarm, I put the cell in it, thus letting each swarm rear the queen, to pay for itself. In this way I traded for 14 swarms, and now I have 20 colonies, apparently in good condition, to commence with next spring.

I did not weigh the honey taken from the bees traded for, but I sold \$15.00 worth, gave away considerable to friends, used all we wanted in our family, and, on Aug. 1, we had a full barrel of honey still on hand. How is that for 2 colonies? This was all white clover honey; heart's-ease has formerly been the honey-plant of this part of the country, but this year it gave no nectar.

I have for years been a reader of the AMERICAN BEE JOURNAL, and am much pleased with many of the contributors. Recently I noticed Prof. A. J. Cook's description of the various races of bees. In the past I have been experimenting with many of the different races, and I concluded to use the Italian bees. I find that there is more difference in families, than there is in races, so I have sought after the most prolific and industrious families; but after reading Prof. Cook's article, I have decided to try the Carniolan bees the coming summer.

I practice reversing the brood-nest, and when it is done at the proper time, I believe it is profitable, but not otherwise.

I consider that it pays to feed bees, so I feed in two ways, viz: First, in the spring and summer, by filling the cells and hanging the frame in the hive; second, in the winter, by making honey-candy, and placing it over the frames in such a way that the bees can get around it; then it is unnecessary to feed every day, as one can feed sufficient for several days, with no danger from robber bees.

No person should keep bees unless he gives them the same attention that he gives to any other pursuit. The person that does not take interest enough in the bees to study their habits, and provide for their wants, is unworthy the fruit of their labors.

Corning, Iowa.

HONEY.

Calling it "Modified," Instead of "Digested," Nectar.

Written for the American Bee Journal
BY CHAS. DADANT.

These words, "digested nectar," advocated by some savants of America, have, so far, occupied too large a space in the columns of our bee-periodicals. According to the ideas of these gentlemen, "digested" means that honey is in a condition to be ready for assimilation; yet I have seen some people getting indigestion by eating comb honey, when their stomachs were yet loaded with some of the food of their last meal. In such cases, at least, the indigestion contradicted the idea of Mr. Heddon, that the wax of the comb helps digestion.

Mr. Kanzler, on page 70, goes further in the definition of the word digested, for he says that eggs are digested worms—and milk, digested grass. Then the horns, skins, hairs, bones, and flesh of cows are digested grass, too; yet they are far from being ready for assimilation.

No doubt the word "digestion" means change in the substances digested. In chemistry, it means to mix or to combine slowly some substances, such as stomachs of hogs with chlorhydric acid to obtain pepsine; thorn apple and alcohol, to get a narcotic; bitter apple with alcohol, to have a purgative and vomiting drug, etc. But to the minds of most of us bee-keepers, the idea of such digestions is far from exciting appetite. Furthermore, these digested drugs are not all ready for assimilation.

The nectar is often but half-digested, and, as we cannot say that a half-

changed matter is digested, I think that this term, when applied to honey, ought to be replaced by the word "modified."

The discussion raised on this word is of no more consequence, for us bee-keepers, than the one relating to the uses of the three pairs of glands of worker-bees. It had been admitted, for scores of years, that the highest pair of these glands had the function of secreting the larval food, when Leon Dufour advanced that this food was a product of the stomach of the young bees, and found a few savants to endorse this view; although coming from a man who had emitted the absurd theory that the bee-keepers, who had advanced that the scales of wax were secreted in the pockets placed between the rings of the abdomen of bees, were mistaken, for these particles of wax were produced in their mouths, and placed in these pockets by the bees, to be flattened and ready for use. Both of these theories show that, too often, men of science regard as truths, the conceptions of their imagination.

Hamilton, Ills.

HIVE-COVERS.

The Advantages of the Flat-Board Covers for Hives.

Written for the American Bee Journal
BY L. W. LIGHTY.

The cover is one of the important parts of the hive. There are a great variety in use, such as enameled cloth, or oil-cloth, straw mats, and mats, etc., of other material resting on the frames or sections. These mats or cloths are very inconvenient—make double work, and, most of all, are death-traps, for at some unexpected time, the bees will find a little corner or hole to get into the cap, or space above the cloth, and when you open it, you will be horrified to find a pint or more of dead bees, and then you will wish you had a better plan, and resolve to look oftener after them; but it will occur again and again.

The only hive-cover that is convenient, and will save the lives of the bees, is a plain, good board, with two cross-pieces nailed or screwed on top, at each end, to keep it from warping. There must be a bee-space on top of the brood-frames, and on top of the sections, and you can lay the cover on, and be through, with no fixing or adjusting of mats, and, after all, have a lot of bees die of starvation.

I notice that some bee-keepers object to the board because so many bees are smashed; but I can open and close ten hives with flat-board covers, in the

same time that it takes to open and close five hives with a cap and mat, and with killing only one-tenth as many bees. The flat board is also cheaper, and more easily made. In these days of close calculation, we must economize.

Some will want a cap to put a cushion in, in winter; but I simply add a brood-chamber, and have the space I desire for winter, and am not bothered with it when I do not need it.

I was never troubled with brace-combs in the bee-space under the cover, if made of the proper size; but when using a mat, the bees would work until they had a space arranged to suit themselves, and had the mat secured from side to side.

I am sure that if any one gives the flat-board cover a fair trial, he will have no other.

Mulberry, Pa.

FLORIDA.

Bees Gathering Honey—Swarming Expected Soon.

Written for the American Bee Journal
BY JOHN CRAYCRAFT.

We read the BEE JOURNAL carefully, and learn from its pages what the bee-keepers through all the North are doing, and in various places in foreign climes. The words given by the numerous correspondents show that throughout the North there is a very mild winter, very often with bees on the wing. Whether this will terminate for the best, is to be decided later. I fear that stores will be consumed before they will be able to gather again.

This is not the case with us. I do not think that there have been five days since Dec. 1, but what our bees have stored a surplus. About Dec. 15, the maples began to bloom, and there was a continuous flow of honey, the bees gathering a surplus and building comb; and for the past ten days the willows have been giving them all they can do—more honey being stored than is best for fast brood-rearing, the queens being crowded. We did not desire to extract, for the honey is dark, with a great deal of pollen in it. This willow-flow will last, from what I saw to-day along the river, for at least ten days more; there is great quantities of it along the river, and in the swamp. The willow is similar to the kilmonark that I have seen in Indiana and Kentucky.

Drones are out daily, and we expect swarms at any time, although we are trying to equalize all colonies, so as to have all the field-bees possible when

orange bloom comes on, which will be about the last of February, from which we get our first fine honey; and this will last for about four weeks. We hope to get it strictly pure, and we hope to send a sample to the BEE JOURNAL office, so that the editor may judge as to its merits.

We have only 38 colonies, but expect to double them within the next sixty days. We will work for increase, as our fields would suffer, for along the river for about fifty miles, it is almost one continuous, unbroken swamp on one side or the other, with many orange groves, some on the river banks, and others on the dead river branches, that extend out in many places; so that where desired we can move bees very easily and safely on the river, by boats (small row-boats). The river is very narrow, and is not much in the way of bees flying. This day I saw our yellow Italian bees two miles up the river, on the willows. There are no Italian bees near us.

St. Francis, Fla., Jan. 30, 1890.

SELF-HIVER.

Its Advantage in the Apiary—Foul Brood.

Written for the American Bee Journal
BY GEORGE SHIBER.

I was very much interested in reading, on page 27, Mr. Alley's article in regard to his new swarm-hiver. It is truly a novelty in that line, and it is much more interesting to note that it will work. I am glad that some one has perfected an arrangement which is for the good of a part of the fraternity of bee-keepers, who do not make a specialty of bee-keeping, but keep say ten or a dozen colonies for the pleasure and profit of the honey.

Swarming has been the only objectionable thing about bee-keeping, to me, and now *perhaps* that objection can be safely laid away to rest.

There are a number of persons who have made known the fact since, that they have used a similar device for hiving swarms, but the question naturally arises—why have they not made it known? What a boon it will be, if practiced, to have bees hive themselves! Who, but the initiated, can imagine the consternation of a bee-keeper, upon arriving home from business in the afternoon, to find his best queen has departed with—well, never mind the rest, a person feels tired, nevertheless; and I say "Hail!" to the man who can make us easy on that score, and there are many who can second this.

AN EXPERIENCE WITH FOUL BROOD.

On page 54 is a very able article on "Foul Brood," by Mr. R. L. Taylor. It is able, because it is true to nature, and his description of it is just as it appears. He says:

"The descriptions of it, which have been most prominent, are of it as it appears in badly diseased colonies." Every bee-keeper whose apiary has never been visited by the disease, ought to read that quotation twice, and then read "between the lines."

How well I remember the first time I saw indications of foul brood in my own hives. Perhaps, on the whole, there were not over a hundred infected cells in the hive; nevertheless, I was scared at once, and upon taking out portions of the diseased brood, I discovered the indications which all, no doubt, are familiar with.

I went to work at once, and commenced dosing with medicated syrup, carbolic acid being the active principle (the one five-hundredth formula). Honey was coming in freely, so I poured it over the combs (the feed); consequently the disease did not gain much headway, or rather, it got better. "O!" though I, "the disease is mine; I have a finger on its throat." Did it cure it? "Wait till you hear the end."

When the honey-flow ceased, and the feeding was stopped, they were worse than ever; the feed is good to keep it in check, but I cannot believe that it will stamp it out, root and branch, as long as the bees remain on the old combs; for it is a fact, that the disease leaves a black, tarry substance in the cells, and I am inclined to believe that this gummy mass retains the germs of disease. The only thing I know, which will entirely eradicate the disease, is by giving them a new hive and sheets of foundation (after Muth's treatment).

As regards the honey crop: The disease can be kept in check so that it will not materially decrease the surplus honey. Feeding phenolated syrup in the spring, prepared as laid down in Cheshire's book, you will find the hives boiling over with bees, ready for the honey harvest, so that no one need expect to lose much in this respect. On the other hand, your colony, or colonies, need much more attention; for if the disease is allowed to gain much headway during that period of the year when little honey is coming in, it will greatly deplete their number of bees.

Another idea is in regard to the cappings being perforated at a certain stage. Mr. Taylor's experiences agree with mine. I have noted the fact that you will not find one-third of the diseased cappings pierced, and a part of

these will have a large, irregular hole, while others have smaller piercings down to the regulation "pin-head size."

I vote for the golden-rod as the "national flower."

Olean, N. Y.

PRIZE ESSAY.

Extracted Honey—One Method of Its Production.

Written for the American Bee Journal
BY O. P. MILLER.

I do not know of any better way to write on this subject, than to give my way of producing extracted honey.

I use the Langstroth, 8 and 10 framed hive. In the spring I build up colonies as fast as I can, during fruit-bloom, so as to get them in prime condition by the time white clover blooms—this I do by supplying the hive with empty worker-comb (kept over from the previous year) as fast as needed, until they are just booming with bees.

I then put on the surplus hive or super, and put two or three empty combs in super No. 1, and two frames of brood and honey from the brood-chamber, and fill the brood-chamber with empty brood-combs.

As the brood in super No. 1 hatches out, the bees fill the cells with honey, and also work on the other empty combs, as needed, until the hive is full. As soon as super No. 1 is full of comb, and nearly full of unsealed honey, I lift it off, and put in its stead super No. 2, taking three frames from No. 1, and put them into No. 2, with three or four empty frames, as the strength of the colony may indicate; I also fill up No. 1 again with empty combs, then put No. 1 on top of No. 2, observing this rule—always putting the frames, whether full or empty, in the center of the hive, be it the same super or brood-chamber, that the cluster be not broken but continuous from the bottom to the top.

As soon as the frames of super No. 1 are full, and two-thirds sealed over, it is extracted, and immediately put between No. 2 and the brood-chamber; and No. 2 is worked in the same way, leaving the brood-chamber entirely to the queen. What I mean by this is, not extracting from the brood-chamber, as some do. In the meantime, if I am very busy, I put on the third super, and work them as I do Nos. 1 and 2.

In extracting, the honey is put in an open-headed barrel, covered with screen-wire; this takes all the pieces of comb and bees out, and keeps out flies and bees, and does not hinder evaporation. The barrel is exposed to the sun and air. The impurities

arise to the top, and the honey is drawn out at the bottom of the barrel.

MANAGING THE INCREASE.

I will now give my method of increase, which, if not directly, is indirectly connected with this way of obtaining extracted honey. I will also state that my bees did not attempt to swarm more than three times during 1889, and two of those swarms issued from one hive. Now for the plan of increase:

There will generally be two or three combs in the centre of the super next to the brood-chamber, which will be partly filled with brood; these I remove to the nucleus hives, prepared for the purpose, putting three or four frames in a hive, with enough bees to keep the brood warm. This nucleus I build up as fast as possible, so as to have a full colony by the time the fall flow begins, so that they may fill their hive for winter, and they frequently store considerable in the super. By this means, I have nearly all the old bees at work during the honey-flow, as many of the old bees will leave the new, just-formed nucleus hive.

Now for the results: I began the year of 1889 with 16 colonies, and worked 14 for extracted honey. I increased them to 40, took 2,000 pounds of honey, and they have yet an average of at least 25 pounds each. We had a frost in May that killed all the linden bloom, and injured other flowers considerable; also a very dry fall, cutting the fall crop off short in September—altogether not making more than about two-thirds of a crop.

Besides this, I have had a great many combs built, and have considerable surplus beeswax—enough to keep me in foundation. These last two items cannot be realized in the production of comb honey. I can sell my honey very readily at 9 and 10 cents per pound—while comb honey sells at 10 to 12½ cents.

Glendon, Iowa.

HIVE-SWARMER.

Self-Hiving Arrangements and their Originators.

Written for the American Bee Journal
BY HENRY ALLEY.

Being interested in "hive-swarmer," I must say that I am much amused at the claims of priority of invention by several who have now come forward to share in the honor of having been first "in the field" with a swarmer.

How is it that those who have invented these wonderful things, have kept them from the public eye so long?

Why did they not, long ago, bring them out, and not wait for others to do so, and then come forward and claim all the honor of the invention? Instead of putting their inventions to practical use, after having used the swarmer one year, they cast them aside, never to be brought out again until some one else was found who had a better device. This coming in at "the eleventh hour," and claiming all the honor and profits, is hardly the thing.

Some of the claimants for the honor of the invention of the swarmer do not really know what became of their wonderful inventions. They had used them; hung them up in some out-of-the-way place, and that is all they seem to know about it. O, they were great things—worked finely! but of no consequence to the bee-keeper till they thought some other person was likely to make something out of it.

I must say that I admire the disposition of Mr. Stephens (see page 70). He says, "In the summer of 1888, I invented and used the same device (as Mr. Alley's). My tube was made of screen-wire," etc. That is just where the thing is wrong, and is unlike mine. Years ago I tested the screen-wire business, and found it was not the thing; it would not work any better in my apiary than it did in Mr. Stephens', and that is why Mr. S. and I cast it a side.

Notwithstanding the fact that I do not connect two drone-traps with screen-wire to construct a swarmer; and notwithstanding the fact that I spent my time in testing the different materials to use for a passage-way to conduct a queen from one hive to another when a colony of bees swarm, a person now comes forward to claim all the honor of my invention!

Considering the fact that Mr. Stephens used his device one season, and having found it impractical—as impractical it is, if constructed as described by Mr. S.; and, also considering the fact that Mr. S. does not give one instance where his swarmer ever hived a swarm of bees, though he and several well-known and reputable parties watched it, I must say that his claims for an equal division of the honor and profits in my swarmer are quite moderate!

Now, if I say that a patent for a swarmer was granted a man more than three years ago, Mr. Stephens may modify his demands made upon me for a division of the spoils.

Not only has one patent been granted for a swarmer, but another party has had claims in the Patent Office over three years, for a patent on another swarmer. This is rather discouraging news to all those who claim

to be the *first* inventors of self swarm-hivers.

It is queer that all those who have described their swarmers in these columns, entertain the idea that I never saw a swarmer until this winter! What a queer idea!

It will not be out of place here for me to say that all swarmers, thus far described, infringe the patent which I hold on the drone-and-queen trap. The principle for which letters patent were granted in the year 1884, is not changed by the slight changes in the construction of the trap.

Now about the practicability of swarmers: None of those who claim the invention of swarmers, dared to describe them in the bee-papers, for the reason that not one of them, after testing, were found of any practical worth. The screen-wire used to connect the two hives did not work satisfactorily; that is, I found it so, and no doubt others found it the same. The wire-screen destroyed the connection between the bees and queen, after she had entered the new hive. The perforated metal furnishes a continuous passage-way from the home hive to the empty hive, for the bees to enter the new hive when they swarm and return in search of their queen. Most readers can see that there is a great difference between using screen-wire and perforated metal, when applied to a swarm-hiver.

Wenham, Mass.

Doolittle on Queen-Rearing.

Queens can be reared in the upper stories of hives used for extracted honey, where a queen-excluding honey-board is used, which are as good, if not superior, to Queens reared by any other process; and that, too, while the old Queen is doing duty below, just the same as though Queens were not being reared above. This is a fact, though it is not generally known.

If you desire to know how this can be done—how to have Queens fertilized in upper stories, while the old Queen is laying below—how you may *safely* introduce any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and as interesting as any story. Price, \$1.00.

An edition in strong paper covers is issued for premiums. It will be mailed as a present to any one who will send us *two* new subscribers to either the BEE JOURNAL or the ILLUSTRATED HOME JOURNAL.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

- Feb. 19-20.—Ohio State, at Cleveland, O.
Miss Dema Bennett, Sec., Bedford, O.
- Feb. 19-20.—N. E. Ohio, N. W. Pa., and Western New York, at Cleveland, Ohio.
Geo. Spittler, Sec., Mosiertown, Pa.
- May 1.—Southwestern Wisconsin, at Boscobel, Wis.
Benj. E. Rice, Sec., Boscobel, Wis.
- May 3.—Susquehanna Co., at Hopbottom, Pa.
H. M. Sealey, Sec., Harford, Pa.
- May 19.—Northern Illinois, at Rockford, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.

In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

SELECTIONS FROM OUR LETTER BOX

Bees are Booming—Cedar Bloom

The weather has been so mild this winter that vegetation is growing like it does in the spring—red clover was in bloom on Christmas. Bees are fairly booming, and have been carrying in pollen since Jan. 10. I have 30 colonies in good condition, some of which are working as strongly as if in the midst of a honey harvest. Bees are now at work on cedar blossoms—something that I never noticed before. I do not know whether they get nectar or pollen from them.

E. W. POWERS.

Palmyra, Mo., Feb. 3, 1890.

The Golden-Rod Did Well.

We have no reason to complain of the honey season of 1889, but everything to be thankful for. We hope that 1890 may be another big bee-year. I did not get as much honey as some of my neighbors, as I was working for increase; but some of my colonies gave 160 pounds each, and 12 of the best colonies gathered 10 pounds each of golden-rod honey, and I left considerable honey with the rest of them.

Tiverton, Ont.

MATTHEW ALLISON.

Golden-Rod Honey—Swarming.

I notice that one correspondent says, on page 58, that he does not think "there ever was an ounce of golden-rod gathered." As I am one that has reported honey being gathered from golden-rod, I suppose, in his opinion, I and others who have reported securing honey from golden-rod, must be mistaken. I cannot account for the different reports, except from the difference in location. I kept bees for twelve years in Iowa, and I never knew them to get any honey from that source there; I have kept bees seven years here in Missouri, and I know whereof I speak, when I say that bees gather honey from golden-rod here. They do not get it every year, but some years we get a good surplus from it. I have seen the bees very thick on it—from one to six or eight bees on one stalk, and they were bringing in the nice, golden-colored honey fast from it, and not from asters, as one correspondent claimed.

Another correspondent claims that Mr. Doolittle is wrong in his opinions in regard to giving swarms a frame of brood to prevent absconding. I came to the same conclusion as Mr. Doolittle has, years ago, and have not for years practiced it. There are other good reasons against this practice, as well as its failure to prevent swarms from

absconding. Still another correspondent claims that Mr. Doolittle's plan of forming nuclei does not work with him. Now I must say that I think the fault is with the correspondent instead of the method, as I have practiced it a good many times, and always with success. It would be easy to make a failure, if you should happen to get the queen from the hive where you got the bees for the nuclei; the result would be, that when you give them a queen (thinking they had none) she would be destroyed.

L. G. PURVIS.

Forest City, Mo., Feb. 4, 1890.

[The letter from Mr. Ira Reeves was published on page 58, while we were confined to our bed, as announced in these columns. Had we been able to reply, one would have followed the letter. Mr. Reeves certainly *could not* mean to record anything more than the observations of himself and his neighbors *in that locality*, and while the golden-rods yield honey in many localities, we are well aware that in other places they have often failed to do so. This will explain the position taken by Mr. Reeves.—Ed.]

The Dibbern Bee-Escape.

Being much interested in the bee-escapes receiving so much attention at the present time, I obtained the latest invention of Mr. Dibbern. I could not quite get the idea from the illustration on page 798 of the AMERICAN BEE JOURNAL for 1889. Perhaps I am a little dull in that direction. I have the device now. I am not in the habit of praising things before a trial, but from what I know of the habits of bees, and judging this device theoretically, I believe it will work. The beauty of it is its idea of practicality. No, that is not all, because the escape is beautiful in design and in workmanship. It will evidently work on any kind of a hive. A circular hole of the proper diameter, is all that is needed to affix it to a honey-board or cover that has a bee-space above and below.

Since the escapes are so inexpensive, they will certainly be thoroughly tried the coming season. If this will work successfully between the brood-chamber and the extracting-super in the fall of the year, when bees so *stick* to their combs, I shall feel like Sancho Panza did when he blessed the man who invented sleep. Mr. Dibbern has given us an idea that is worthy of a patent. Many simpler articles have been patented, and that he has donated the idea to the fraternity, should not tempt us to filch the product of his genius.

Forest City, Iowa.

EUGENE SECOR.

Self-Hivers—Carniolanizing Bees

Do you publish a German edition of the AMERICAN BEE JOURNAL? I prize the BEE JOURNAL very much, and do not intend to be without it as long as I keep bees. I commenced last spring with one colony of Italians, that I bought the summer before; they swarmed once, and I took 120 pounds of honey in two-pound sections, mostly white clover, but some of it was from golden-rod and aster. I bought 3 more colonies in the fall, and all of them have plenty of honey—enough to carry them through the winter, unless we have too much warm weather. They were flying on Jan. 28th and 29th, being the first time they had been out since Nov. 6, although the winter had been very mild up to about the middle of January.

I heard of very much the same kind of a self-hiving arrangement as Mr. Alley's, sev-

eral years ago. A German here kept bees in the old country before he came over, five years ago, and he says that they used the same device there before he left. If I have time I shall try Mr. Dibble's plan described on page 72, the coming summer. It is much simpler than Mr. Alley's, and I think that it is much better. Will Mr. Dibble please answer this question: How would it do to use a strip of queen-excluding honey-board on the front of the hive, in place of the honey-board under the frames?

When is the best time to Carniolianize my bees, by introducing a queen? How would it do to destroy all queen-cells in the parent hive, immediately after swarming, and then send for a queen and introduce her?

G. D. TOLMAN.

Shawano, Wis., Feb. 3, 1890.

[We do not publish a German edition of the BEE JOURNAL. To do as you suggest will be all right about introducing a Carniolan queen.—Ed.]

A Very Rainy Season.

We have had more rain here this season than people can remember of, that have been here for 12 or 15 years. I expect a good honey harvest this year.

C. SCHLIESMATER.

Pasadena, Calif., Jan. 25, 1890.

Poor Season for Bee-Keeping.

The honey crop was almost a failure last season—it was the poorest season in this locality for honey and increase that I remember of for 25 years. I have 100 colonies, all in good condition. I put them into winter quarters on Nov. 28, 1889.

M. SNYDER.

Berne, N. Y., Jan. 30, 1890.

Japanese Buckwheat, etc.

The bees had a general jollification to-day, flying as briskly as in spring—a gentleman driving to my house was in fear of having his horse stung; I think that his fears were unfounded, however, as the bees seemed too much absorbed in their pleasures, to show any displeasure at the approach of any one. The lack of snow is destroying great quantities of clover. I would recommend the sowing of Japanese buckwheat, which proves a great yielder of both grain and honey the last season.

S. J. YOUNGMAN.

Lakeview, Mich., Jan. 21, 1890.

Some Experience—Honey-Trees.

Last spring I bought 2 colonies of bees, and one cast 2 good swarms in May, and the other did not swarm at all, but I got 165 pounds of surplus honey from it, besides storing plenty to winter on. The colony that swarmed stored about 45 pounds, and the 2 new colonies stored enough, with what the mother colony stored, to make 265 pounds of surplus honey in all. One of the new colonies cast 2 swarms, which stored plenty for the winter. I sold enough honey to pay for the 2 old colonies, and had all the honey we could eat all summer and fall. I have nothing on the farm that has paid me better for the capital invested, than did those 2 colonies of bees, and now I have 6 colonies in winter quarters, and the temperature in the bee-cellar has been between 36 and 42 degrees above zero; the past two or three days, at from 36 to 38 degrees below outside, and at the same time it was 36 to 38 degrees inside. I am afraid my cellar

will get too cold, if this cold weather lasts much longer.

I have one-half acre of Alsike clover, which bloomed last summer for the first time, and I never saw bees work on any blossoms as they did on that. I shall sow more of it in the spring. I think that if all bee-keepers would sow some honey-producing plants, such as Alsike, white clover and buckwheat, and would plant plenty of basswood, soft maple and box-elder trees, they would not have to report so many failures of the honey crop. If bees pay at all, I say, give them plenty of pasturage, and they will give still greater returns to the apiarist. I have about a dozen basswood trees in a grove near the house, which I planted ten or twelve years ago; they have produced blossoms for three years, and I never saw any basswood trees in their native woods that bore such a profusion of blossoms; besides, I planted at the same time 100 or more soft maples and box-elders, which give the bees something to work on; I also have thousands of white willows planted, which furnish the bees with pollen and honey very early in the spring. It pays to raise honey-producing plants and trees. D. B. CASSADY.

Litchfield, Minn., Jan. 21, 1890.

Wintering Nicely—Alsike Clover

Bees in this locality are wintering nicely, so far. They had plenty of natural stores, but gave us but little surplus. I have 26 colonies packed in clover chaff, and on the summer stands. Which is best for seed, the first, or the second, crop of Alsike clover? Wm. G. CORY.

Cason, Ind., Jan. 27, 1890.

[Alsike clover ripens in the latitude of Chicago, in the latter part of July, but need not be cut until August, if the weather should be unfavorable. The crop of seed is always obtained from this cutting, in which respect it is unlike the common red. It is not advisable to cut this clover more than once each season, but it may be pastured moderately during the fall. When cut for seed, it may be threshed from the field with a common clover machine; but, if more convenient, it may be stacked and threshed during the fall or winter.—Ed.]

Winter Stores—Digested Nectar.

My bees have had a jolly time to-day, so I took off the covers and gave them an airing, and I think that it did them good. We have had so much rain that the chaff was a little damp, but the sun dried it out nicely during the day. I examined 3 colonies, and found they were rearing brood very fast—too much so, I think. I am of the opinion that bee-keepers will have to do a good deal of feeding this spring. My bees have consumed nearly half of their winter stores, already. Talk about wintering a colony on 20 pounds of honey! My bees have used that amount up to this date; but of course we have had an unusually warm winter, which accounts for it. There seems to be more bees in the hives now, than there were last fall. I would like to hear something more about "digested nectar;" it seems to me that somebody ought to know whether honey is digested nectar or not. My simple opinion is, that there is nothing digested about it. If it is digested, it seems to me that the water that there is in nectar would be absorbed so that the bees could cap it as fast as gathered.

ORVILLE JONES.

Stockbridge, Mich., Feb. 3, 1890.

Straining Extracted Honey.

In the "prize essay," on page 52, by Dr. G. P. Hachenberg, he speaks of straining honey. I got sick of straining honey through a cloth the first year I extracted honey. When I extract honey, I put it into alcohol barrels as fast as it comes from the extractor; when one barrel is full, I let it stand a day or two, and every impurity in the honey will come to the top, when I skim off all that I can get. When I sell it, I melt it in a boiler, and skim it again, and there will not be a speck of anything in it. The way I strain the cappings and skimmings is as follows:

I make a box about 14 inches square, and about that high, and nail slats on the bottom, with a very little space between. I make a platform of boards high enough from the floor, to put tin pans under the lower side to catch the honey, making the back higher than the front. I lay the boards double, and break joints, put the box on with the front side raised a little from the boards, to let the honey out; fill it up with cappings, and when I have any skimmings, I put that on top, and the honey will drain out clean. I put the honey that drains out, into the barrel that I am filling from the extractor, and it will all be skimmed together. In that way my honey is as clear and nice as can be, and it is a great deal better way than straining through cloth.

Averill, Mich.

CHARLES INMAN.

Wintering Well—Binders.

Up to this date I have never known bees to winter so well—indeed, they have had but little "wintering" to do. It has been incessantly warm, and the bees have been almost constantly on the wing, bringing in pollen, and the last few days they have stored some honey. They are building comb and breeding rapidly; a peep into the brood-chamber presents the appearance of the height of the breeding season. Thousands of brood in all stages, from the egg up to the hatching bee, and in one of my strongest and most thrifty colonies, I noticed (to-day) a queen-cell started—I suppose, under the impulse of swarming.

I received the binder you sent me a few days ago, and in a few minutes after its reception, with the assistance of my "better half," I had 52 copies of the AMERICAN BEE JOURNAL (for the year 1889), in a solid, well-bound book, which I esteem as one of my most valuable bee-books.

The bee-keepers of this (Mecklenburg) county, contemplate at an early day, the organization of a bee-keepers' association.

E. W. LYLES.

Charlotte, N. C., Jan. 28, 1890.

[Bee-keepers should always bind their numbers of the AMERICAN BEE JOURNAL. It is handy to always have them in order, and it saves them from being lost, to file every one as soon as it comes to hand. The pleasure of reading and referring to articles is worth more than the Binder costs.—Ed.]

Bees Wintering Fairly.

My bees appear to be wintering fairly, though they have not had a flight for some time. I feared they would have a hard time this winter, when, last September, I saw their hives containing considerable fall honey and honey-dew, which could not be extracted on account of its consistency; but at present I am encouraged. I must say that I agree with all contained in Dr. Tinker's article on page 73, about "Double-Walled vs. Single-Walled Hives;" though the Doctor puts some points rather strongly.

J. H. LARRABEE.

Larrabee's Point, Vt., Feb. 4, 1890.

Poor Honey Crop—Golden-Rod.

The past season was rather discouraging for a beginner in this locality. I started in the spring with 13 good colonies, increased them to 26, and took only 300 pounds of comb honey. The basswood on the low land was all killed by frost. The golden-rod has never produced one pound of honey for me, as it grows all around my house, and myself, wife and two boys have watched it for two seasons, and never saw a bee on one bloom yet. Our main honey-plants here are, sweet clover, wild cucumber, heart's-ease and buckwheat. The AMERICAN BEE JOURNAL is a very valuable paper for the bee-keeper, and I will never be without it while I keep bees.

JOHN GOFF.

Deloit, Iowa, Jan. 30, 1890.

Bees Afflicted with Diarrhea.

My bees are in the cellar, and have the diarrhea badly, some hives being spotted as badly as any I ever saw. The temperature has not been below 45 degrees, and has been kept below 45 and 52 degrees, so it surely must be bad food. There was considerable honey-dew here last year. If the spring is late and unfavorable, the loss may be frightful.

B. H. STANDISH.

Evansville, Wis., Jan. 30, 1890.

Gathering Pollen all Winter.

I have 8 colonies of bees in the cellar, and 8 on the summer stands; they have been flying every two or three days, all winter. Yesterday they were bringing in pollen from the red maples, and they have been getting it since Christmas, which means brood, if I know anything about bees; and brood at this time of the year, with a two weeks' shut up, means diarrhea and death, I believe. That is the way this winter is going to serve us.

THOS. THURLOW.

Lancaster, Pa., Jan. 28, 1890.

Getting Honey from Golden-Rod

Mr. Ira Reeves seems to entertain no very high opinion of his brother bee-keepers' powers of observation, as he says on page 58, that he does not believe there "ever was an ounce of honey gathered from golden-rod." He may be correct, as regards his own locality, but that does not prove that every one else is mistaken, as he seems to think. I might with equal propriety say that because I have never seen the Mississippi river, I do not believe there is any such river in existence.

Wilmington, Vt.

E. C. BOYD.

The First Year's Results.

I began bee-keeping last spring with one colony, which I bought for \$4.00. They were an extra-strong colony of hybrids. I increased by dividing, early in May, about a week before a cold snap of about two weeks came on; I thought then that I had made a mistake in dividing them so early, but both colonies had good queens, and the hives were filled with bees by the time clover began to blossom. As soon as the honey began to come in, I put on supers, and kept the bees busy by having plenty of sections for them to fill, although I did not give them too many at once. The new colony afterward cast a swarm, making 3 colonies, which, altogether, stored 300 pounds of as nice comb honey (mostly in one-pound sections) as ever was put up by the bees. My bees were very good honey-gatherers, and built very straight combs, but they were the crossiest bees I ever saw so I con-

cluded to Italianize them, and in August I obtained three fine Italian queens, which I successfully introduced, and now I have 3 colonies of handsome Italian bees. I left them on the summer stands, and they are wintering finely. I left about 30 pounds of sealed honey in each hive, which will more than carry them through the winter. I use the standard Langstroth hive, and I think that it is the hive. I like the BEE JOURNAL, and feel well acquainted with its correspondents, although I have never met many of them.

ROBT. WALSTROM.

Lake City, Minn., Feb. 3, 1890.

Everything Lovely in Texas.

My 80 colonies of bees are in fine condition. Young bees are hatching by the thousands. We have had the mildest winter I ever saw—in fact, December and January have been more like March and April. Wild peach, elm, and fruit-trees are in full bloom. Farmers are preparing to plant corn; birds are singing as though it was really April; and bees are now tumbling into the hives, loaded with both honey and pollen, as though the fate of nations rested upon their speed. Drones are flying from some colonies. Surely, the Gulf Stream has changed its course, or we may have winter yet. Horse-mint—our main honey-plant—never looked finer, and there is plenty of it. Grass looks as green as a wheat-field, cattle are fat and sleek, and men are going in their shirt sleeves.

W. S. DOUGLASS.

Lexington, Tex., Jan. 25, 1890.

HONEY AND BEESWAX MARKET.

DENVER, Jan. 27.—1-lb. sections, 13@15c.; Extracted, 7@8c. Beeswax, 20@25c. Market well supplied. Demand moderate.

J. M. CLARK COM. CO., 1421 Fifteenth St.

KANSAS CITY, Jan. 25.—Market continues very dull. Demand very light. Weather is entirely too warm. We quote white 1-lb. comb, 13c.; fall, 1-lbs., 10@11c.; white, 2-lbs., 11@12c.; fall, 2-lbs., 10c. Extracted, white, 7@7½c.; amber, 5@6c. Beeswax, 22c.

CLEMONS, CLOON & CO.,

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CHICAGO, Jan. 22.—We quote: White clover 1-lbs., 11½@12½c.; 2-lbs., 10@11c. Basswood 1-lbs., 10½@11c. Buckwheat 1-lbs., 8@9c. Extracted, 8½@7½c. Beeswax—bright, 25@26c.; dark, 23@24c.

S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Jan. 21.—Demand light and prices lower. Very fancy 1-lbs., 12 in a crate, 13c.; good white 1-lbs., 12@12½c.; dark 1-lbs. and 2-lbs., 8@10c.; white 2-lbs., 11@12c. Extracted, white, 6@7c.; dark, 5@6c.

HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, Jan. 8.—Sales are light, at 12@13c. for white 1-lbs.; dark, 8@10c. Extracted dull at 6@7c. for dark, 7@8c. for fancy white. Beeswax, prime, 25c.

R. A. BURNETT, 161 S. Water St.

DETROIT, Jan. 24.—Comb honey is quoted at 12@14c. Sales slow. Extracted, 7@8c.—Beeswax, 24c.

M. H. HUNT, Bell Branch, Mich.

BOSTON, Jan. 9.—Best 1 lbs., 16c.; best 2 lbs., 15c. Extracted, 7@9c. Beeswax, 23c. Trade is dull.

BLAKE & RIPLEY, 57 Chatham St.

CINCINNATI, Jan. 8.—The very mild winter apparently has a depressing effect on the honey market, more especially on comb honey. Best white is offered at 14@16c., but concessions have to be made to effect sales. There is a fair demand for extracted at 5@8c.

Beeswax is in good demand at 20@22c. for good to choice yellow. C. F. MUTH & SON, Corner Freeman & Central Aves.



ALFRED H. NEWMAN,
BUSINESS MANAGER.

Business Notices.

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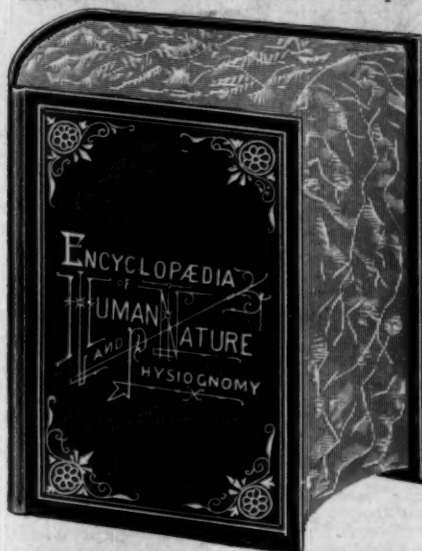
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Clubs of 5 for \$4.00, to any addresses. Ten for \$7.50, if all are sent at one time.

Convention Notices.

The spring meeting of the Northern Illinois Bee-Keepers' Association, will meet at the residence of D. A. Fuller, in Cherry Valley, Ill., on May 19th, 1890.
D. A. FULLER, Sec.

The next regular meeting of the Northwestern Wisconsin Bee-Keepers' Association will be held at Boscobel, Wis., on Thursday, May 1, 1890, at 10 a.m.
BENJ. E. RICE, Sec.

The Ohio State Bee-Keepers' Association will be held in Cleveland, O., on Wednesday and Thursday, Feb. 19 and 20, 1890.
MISS DEMA BENNETT, Sec. and Treas., Bedford, O.

The Northeastern Ohio, Northwestern Pennsylvania, and Western New York Bee-Keepers' Association, will meet in joint session with the Ohio State Bee-Keepers' Association, in Cleveland, O., on Feb. 19 and 20, 1890.
GEO. SPITLER, Sec.

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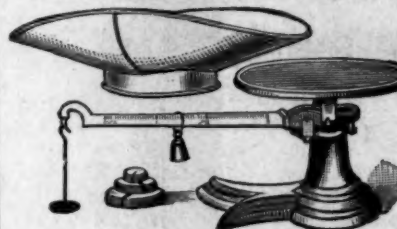
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